

Puerto Cansado in the Saharan south of the country. 1973 saw the third successive autumn of work at Sidi Moussa due to an expedition led by Francis Argyle. The report of the 1971 work has already been published (available from me) and that of the two 1972 expeditions is nearly complete.

The purpose of this note is to point out that further work in Morocco will be particularly useful in view of the studies that have already taken place. Such future visits would be of maximum value if they were directed to the gaps in our information. Two such gaps occur during the summer (late June/early July) and in the late autumn and winter (October onwards). While a visit to Puerto Cansado in the far south requires a cross-country vehicle and a substantial budget, this is not the case for Sidi Moussa. Fully-made-up roads reach this site, which is only a short distance south of Casablanca, the main commercial city. The Moroccan ringing authorities welcome these visits and help to obtain research permits from the government.

If anyone is contemplating taking a ringing party to Morocco or would like more information on the situation, I would be pleased to hear from them. In this way I should be able to supply them with information for the planning and it will be possible to obtain the maximum of results from the effort.

MIKE PIENKOWSKI

AN AGEING TECHNIQUE FOR GOLDEN PLOVER

by Ian Bainbridge

As the Golden Plover (Pluvialis apricarius) is one of the few waders which is left in the category of unageable/sexable in the *Wader Ageing Guide*, and as the species is becoming more and more a prime target for common-netting and mist-netting teams, I decided to attempt to find characters to age and sex the birds, by looking at as many museum specimens as possible.

Having looked at eighty-five museum specimens, I am now confident that Golden Plovers can be aged for at least part of the autumn, using the following characters:

ADULT

The outer webs of the outer under tail coverts are barred strongly gold and brown, perpendicular to the shaft of the feather, or at an angle towards the tail from the feather shafts. (fig 1.)

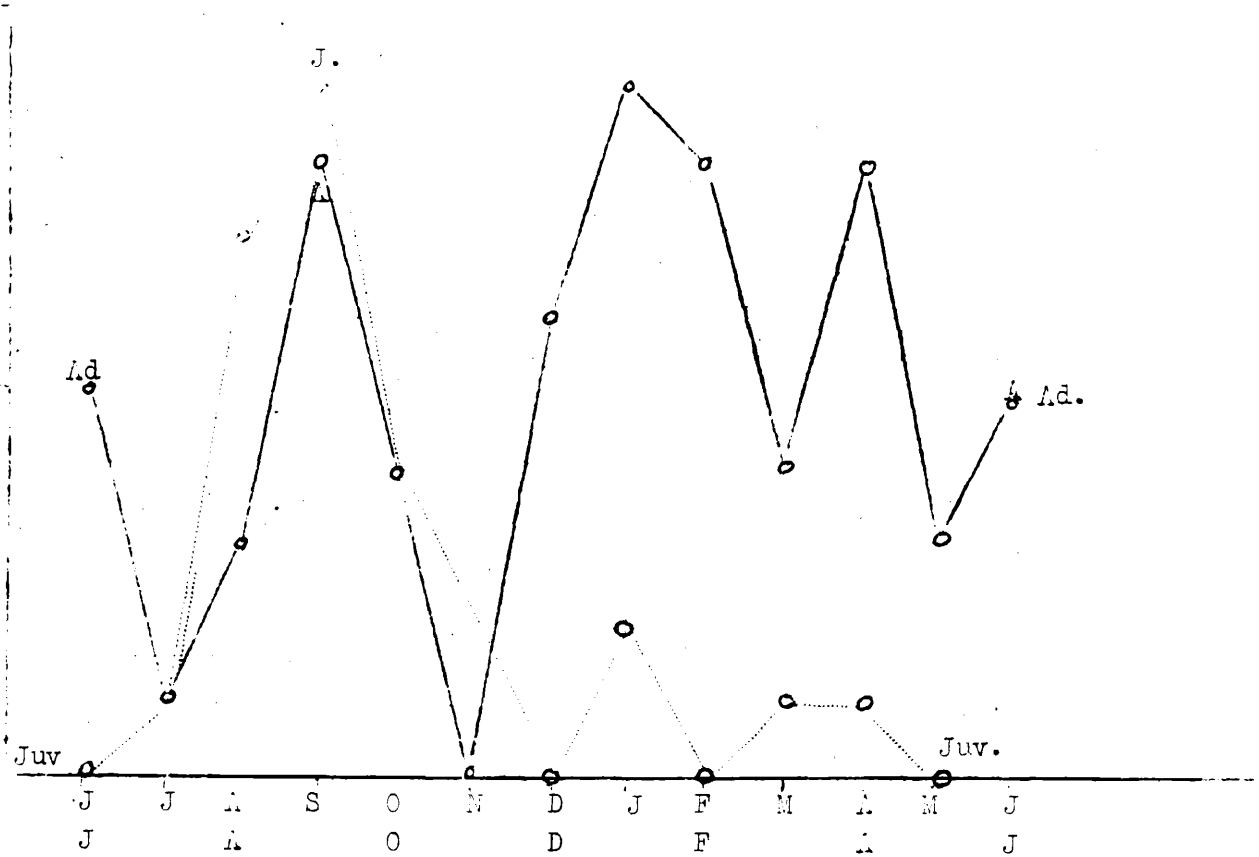
The breast feathers are brown, edged dull gold. (fig 2.)

The belly feathers are white.

Of course any bird that shows any traces of black summer plumage at the end of the autumn moult is also an adult. The above three criteria are for birds in winter plumage.

JUVENILE

The outer webs of the outer under tail coverts are barred less strongly at an acute angle towards the body from the shaft (fig 3.)



NUMBER OF GOLDEN PLOVERS EXAMINED

FIG. 1



Brown



FIG. 2



Gold or white

AD

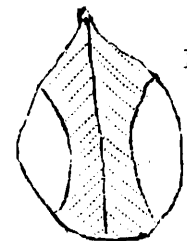
FIG. 3



JUV.

Outer under tail coverts

FIG. 4



Breast feathers

The breast feathers are basically gold, with a brown 'shaft triangle' (fig 4.)

The belly feathers are white edged brown.

I am confident that the above criteria will age Golden Plovers until the beginning of November with certainty, as they agree with all but two of the aged museum specimens, which for several reasons I believe to be wrongly aged. It seems though that most juveniles undergo a body moult from the beginning of November onwards which may encompass the under tail coverts, either wholly or partially. Three specimens in November, January and March exhibited both adult and juvenile under tail coverts, but three specimens, in November, January and April, exhibited only juvenile coverts. This, along with the drop in numbers of specimens from November onwards, which are ageable as juveniles, suggests that at least some juveniles undergo a complete tail covert moult, rendering them indistinguishable from adults. Abrasion or moult of the breast and belly feathers makes these two criteria unworkable from this time of year also.

The graph shows the numbers of juveniles and adults in each monthly sample, aged using the above characters. The tiny sample in November makes it impossible to say at present whether juveniles are all ageable or not in November.

Thus the safe thing to do at present would seem to be to apply the codes '3' or '5' to any birds showing the juvenile characters, but after October to apply the code '2', changing to '4' at the beginning of the new year, for any birds showing the adult plumage. The next step is to catch some Golden Plovers in November to test the validity of the character in that month.

On a slightly separate note, the character of the outer under tail coverts would seem to apply to both of the Lesser Golden Plover species, (P. dominica and P. fulvus), though I have done no more than glance at both of these species.

Finally, I would like to thank the B.M.N.H., Tring, Leicester and Sheffield Museums for allowing me access to their specimens.

WHEN DO WADERS DIE? - A REQUEST FOR HELP

M.W. Pienkowski

Despite the many recent studies on waders, we still have very little information on when the main periods of wader mortality occur - apart from the heavy mortality in very severe winters (see e.g. reports in Wildfowl Trust 15th Ann.Rep. 1962-63). One might expect relatively heavy mortality to take place during periods when energy requirements are high and/or food supplies low. Such periods may occur over winter, at migration times, or even in the breeding season amongst other times, but as yet we have little evidence as to which, if any, of these is important.

The one good type of evidence that birds are dying is the finding of corpses. In the past several studies have been made of times of mortality by the use of reports of ringed birds found dead. This has some disadvantages, in that:-